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2008 global temperature

16 December 2008

In a preliminary report, released today on behalf of the World Meteorological Organization (WMO), the global mean temperature for 2008 is 14.3 °C, making it the tenth warmest year on a record that dates back to 1850.

Climate scientists at the Met Office Hadley Centre and the Climatic Research Unit (CRU) at University of East Anglia maintain the global climate record for the WMO. They say this figure is slightly down on earlier years this century partly because of the La Niña that developed in the Pacific Ocean during 2007.

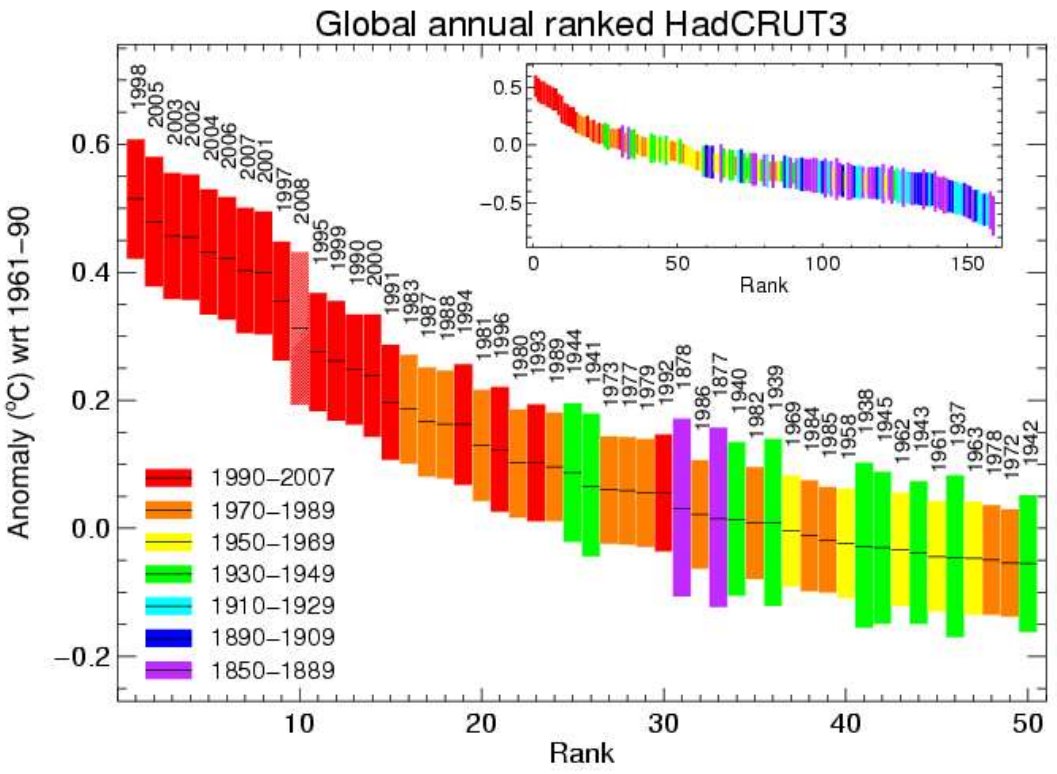
La Niña events typically coincide with cooler global temperatures, and 2008 is slightly cooler than the norm under current climate conditions. Professor Phil Jones at the CRU said: "The most important component of year-to-year variability in global average temperatures is the phase and amplitude of equatorial sea-surface temperatures in the Pacific that lead to La Niña and El Niño events".

The ten warmest years on record have occurred since 1997. Global temperatures for 2000-2008 now stand almost 0.2 °C warmer than the average for the decade 1990–1999.

Dr Peter Stott of the Met Office says our actions are making the difference: "Human influence, particularly emission of greenhouse gases, has greatly increased the chance of having such warm years. Comparing observations with the expected response to man-made and natural drivers of climate change it is shown that global temperature is now over 0.7 °C warmer than if humans were not altering the climate."

Calculating the changing risk attributable to human influence is part of an ongoing collaboration between the Met Office Hadley Centre and the University of Oxford. Commenting on the dramatically increased odds of such warm years because of human induced climate change, Dr Myles Allen from Oxford University said: "Globally this year would have been considered warm, even as recently as the 1970s or 1980s, but a scorcher for our Victorian ancestors."

Beneath the underlying warming, temperature continues to fluctuate from year to year as a result of natural variations. Stott added: "As a result of climate change, what would once have been an exceptionally unusual year has now become quite normal. Without human influence on climate change we would be more than 50 times less likely of seeing a year as warm as 2008."



More about climate change monitoring

Notes

- The Met Office Hadley Centre is the UK's foremost centre for climate change research. Partly funded by Defra (the Department for Environment, Food and Rural Affairs), the newly-established Dept of Energy and Climate Change and the Ministry of Defence it provides information to and advice to the UK Government on climate change issues.
- The Met Office Hadley Centre and the Climatic Research Unit of the University of East Anglia maintain the global temperature record – HadCRUT3 – on behalf of WMO.
- Globally, temperature was 0.31 °C above the 1961-90 average. In the northern hemisphere the mean temperature was 0.51 °C above average (8th warmest on record) and in the southern hemisphere it was 0.11 °C above average (20th warmest).
- Dr Peter Stott is head of climate monitoring and attribution at the Met Office Hadley Centre; Professor Phil Jones is head of the Climatic Research Unit at University of East Anglia; Dr Myles Allen is head of Climate Dynamics at Oxford University.